

Welcome

Sampling Results for Libby Schools

Libby Little Theater
February 8, 2010
7:00 to 9:00 pm



Libby Asbestos Site, EPA Region 8, Libby, MT

Presentation topics

- Overview of Sampling
- Overview of the Results
- Action Items



Libby Public School Locations

Kootenai Valley Head Start
(Formerly Plummer Elementary School)

Libby High School

Libby Elementary School
(Formerly Asa Wood Elementary School)

Libby Administration Building

Libby Middle School

Libby Parcels



Libby Parcels



ABS Sampled



Site Characterization

- Sampling: soil and air
 - Air samples
 - Indoor
 - ABS
 - Surface soils
 - Ambient air

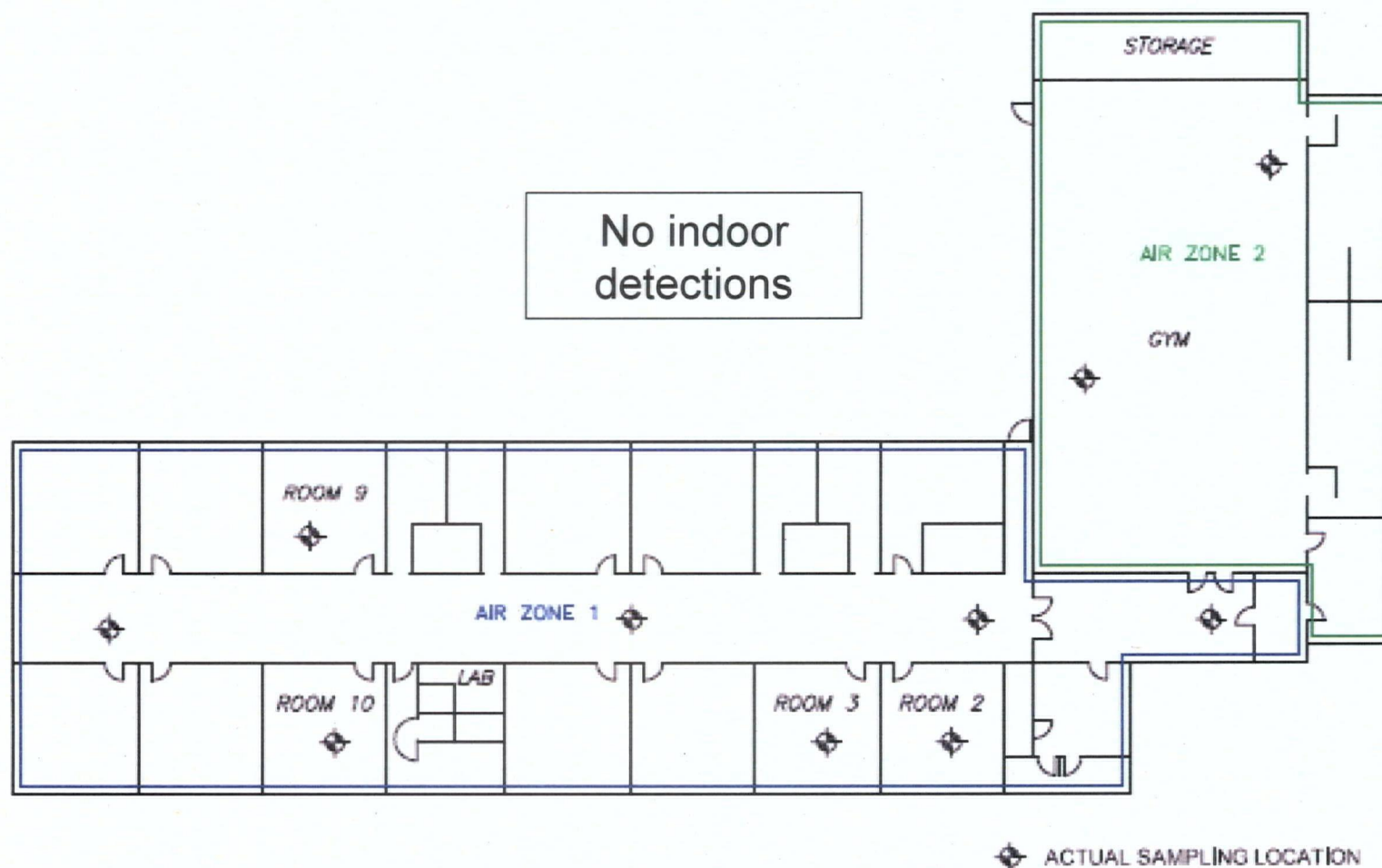


Indoor Air Samples

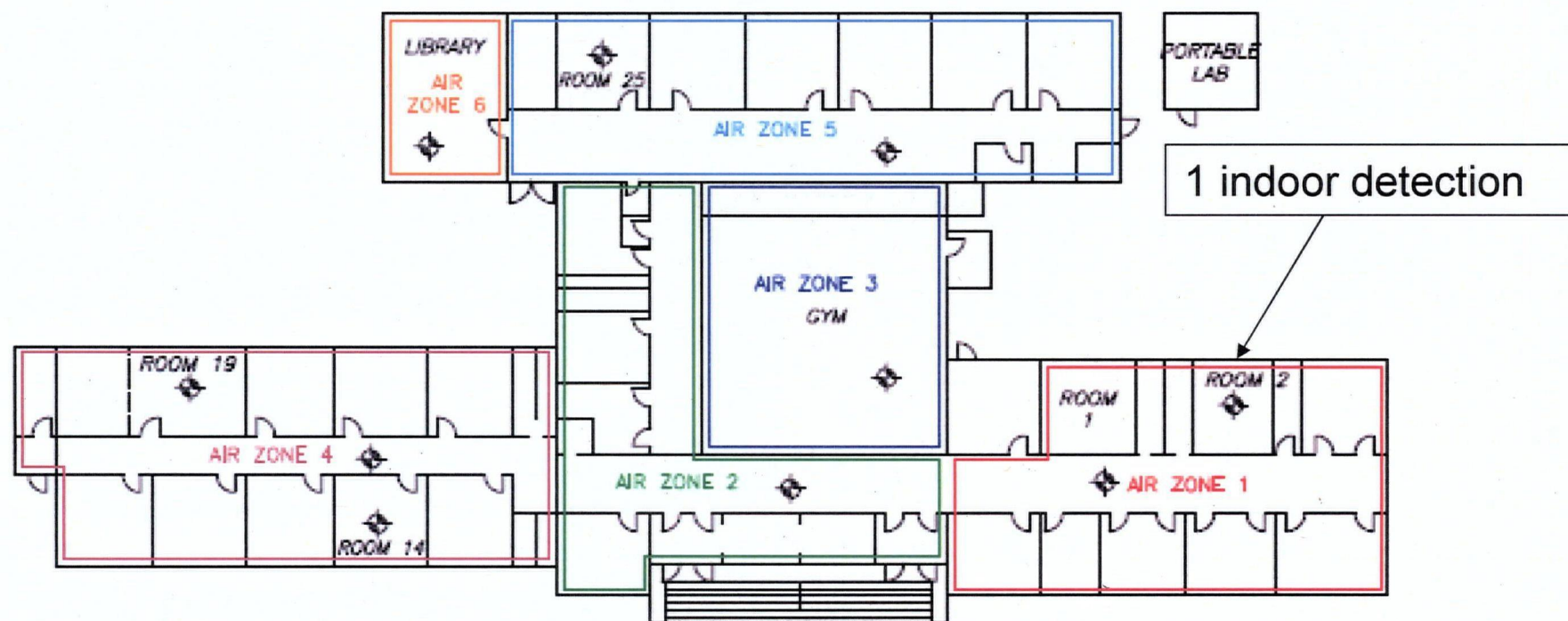
- All Samples are Stationary Breathing Zone Samples
- Rooms sampled
 - Four classrooms
 - Lunch room/cafeteria
 - Gymnasium
 - Four hallways
- Samples were two-day composite samples
- Analyzed by TEM Method ISO 10312
- Target detection limit was 0.0006 structures/cubic centimeter (s/cc)



Kootenai Valley Head Start

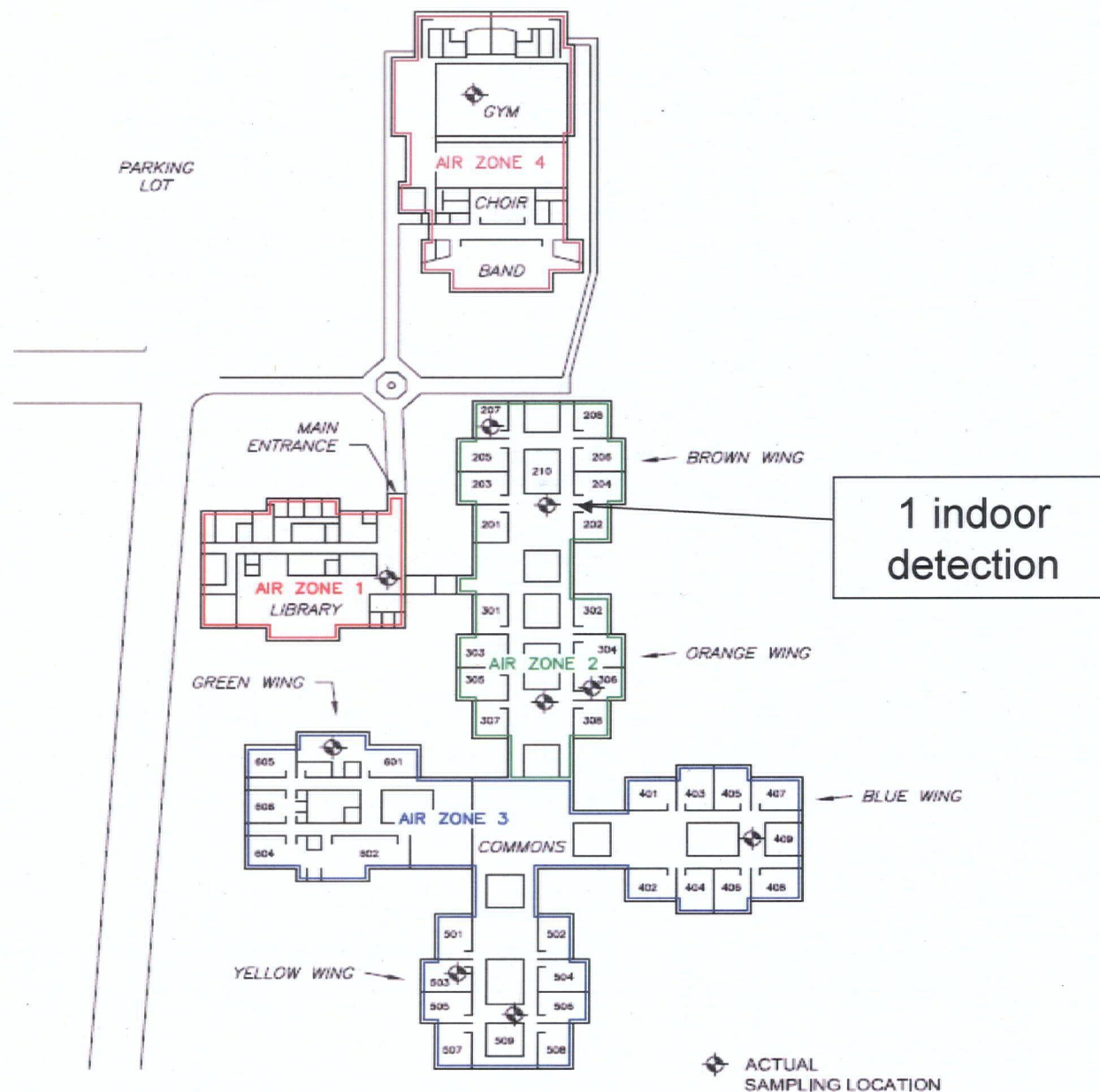


Libby Elementary School

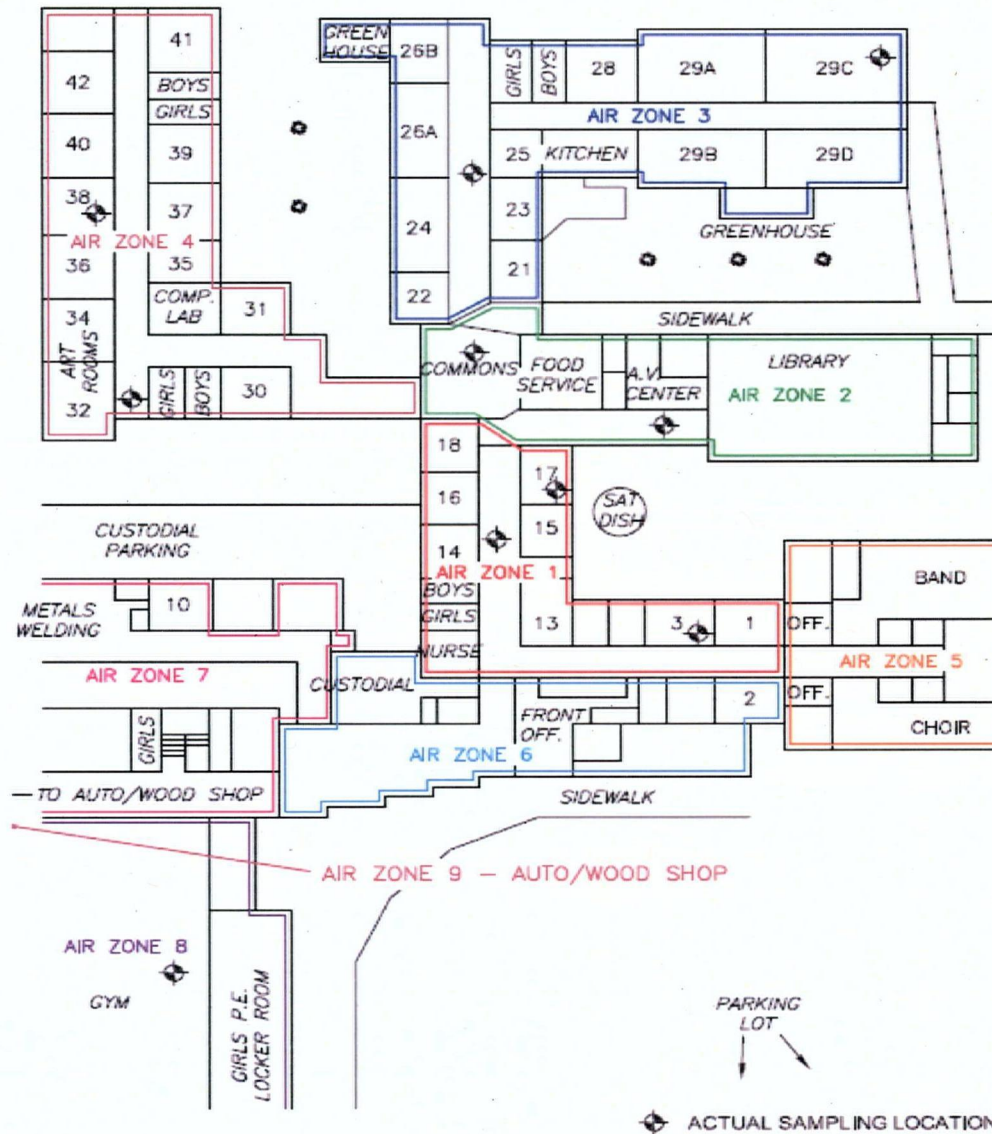


AL SAMPLING LOCATION

Libby Middle School



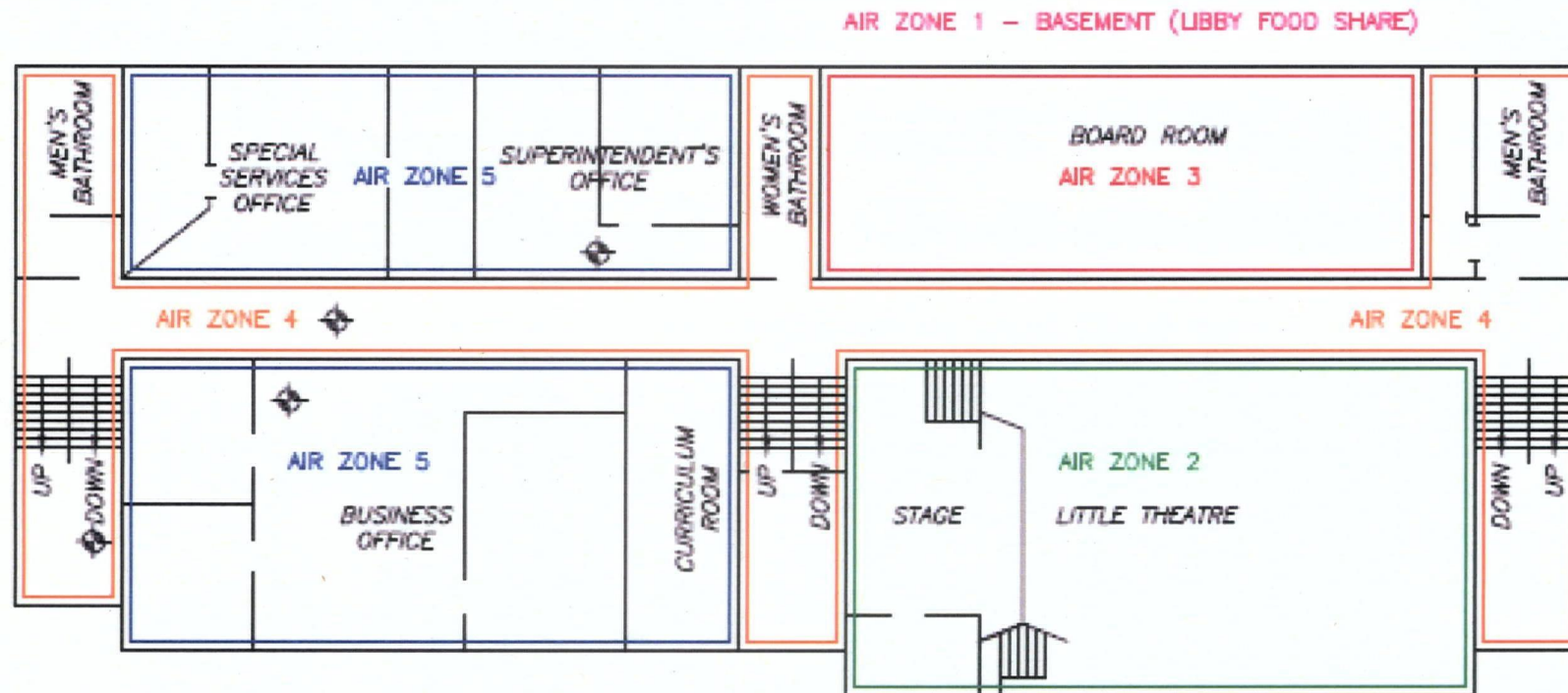
Libby High School



No indoor detections



Libby Administration Building



No indoor
detections

 ACTUAL SAMPLING LOCATION



Summary of Indoor Air Sampling

- 51 samples taken at 5 schools
- 49 samples were non-detect for LA fibers
- 2 samples had detections
 - Libby Elementary School (class room) @ 0.00059 total LA s/cc*
 - Libby Middle School (hallway) @ 0.00051 total LA s/cc

*s/cc = structures per cubic centimeter



Outdoor Activity-Based Sampling

- Student activities
 - Playing soccer, football, baseball, & Frisbee®
 - Swinging on swing set
 - Running on playgrounds
- Maintenance Worker activities
 - Grounds keepers digging, raking, sweeping
 - Grounds keepers mowing lawns



ABS Samples

- Breathing zone air samples collected on filters
- Analyzed by TEM Method ISO 10312
- Target analytical detection limit 0.003 LA cc⁻¹
- 63 samples taken from 5 schools
- 5 detections at 3 schools – 3 student activities; 2 grounds keeper activities



Kootenai Valley Head Start



Activities:
Mowing/Edging

Libby Elementary School



Activities:
Swinging &
Playing

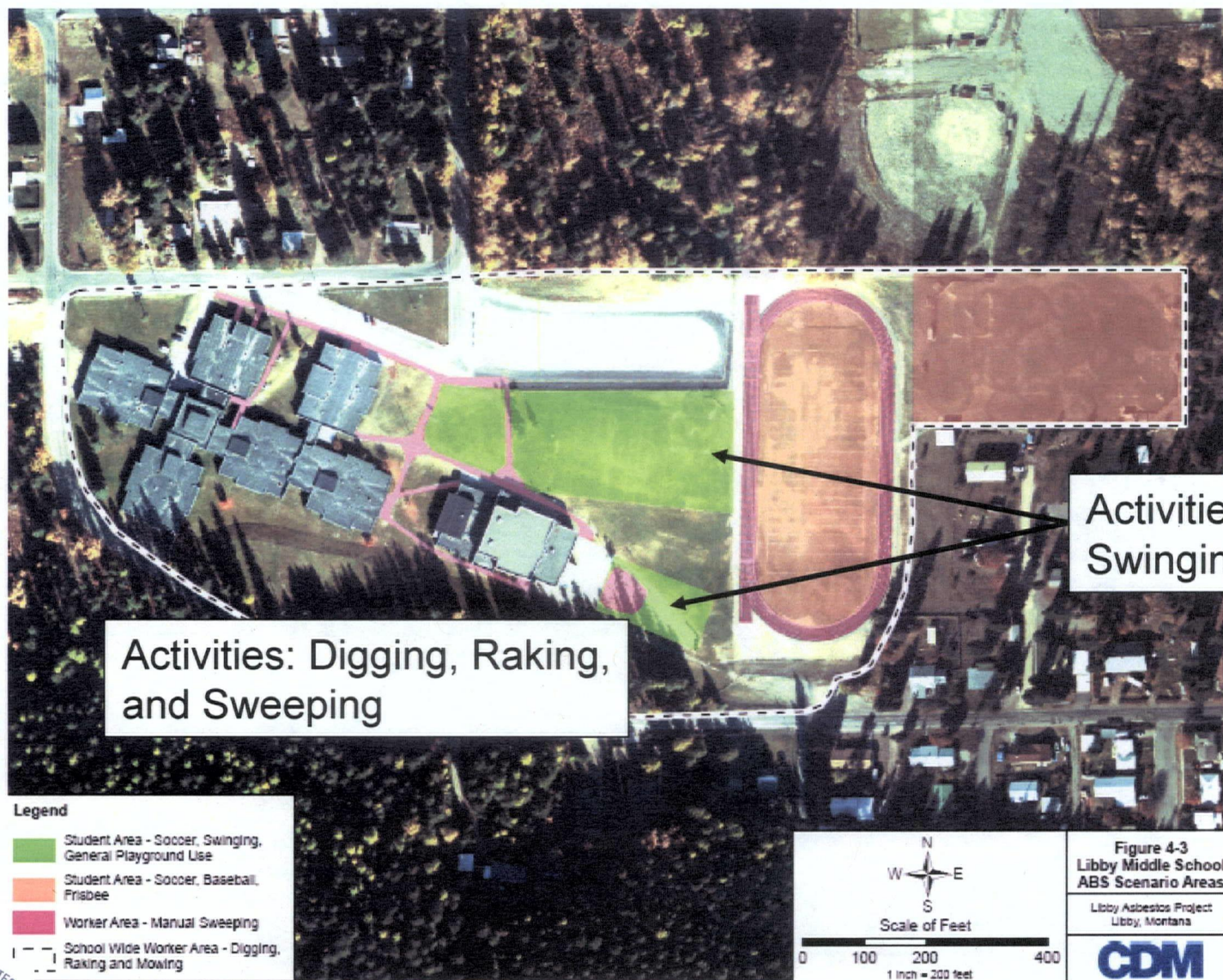


Figure 4-2
Libby Elementary School
ABS Scenario Areas

Libby Asbestos Project
Libby, Montana

CDM

Libby Middle School



Activities: Soccer, Swinging, and Playing

Activities: Digging, Raking, and Sweeping

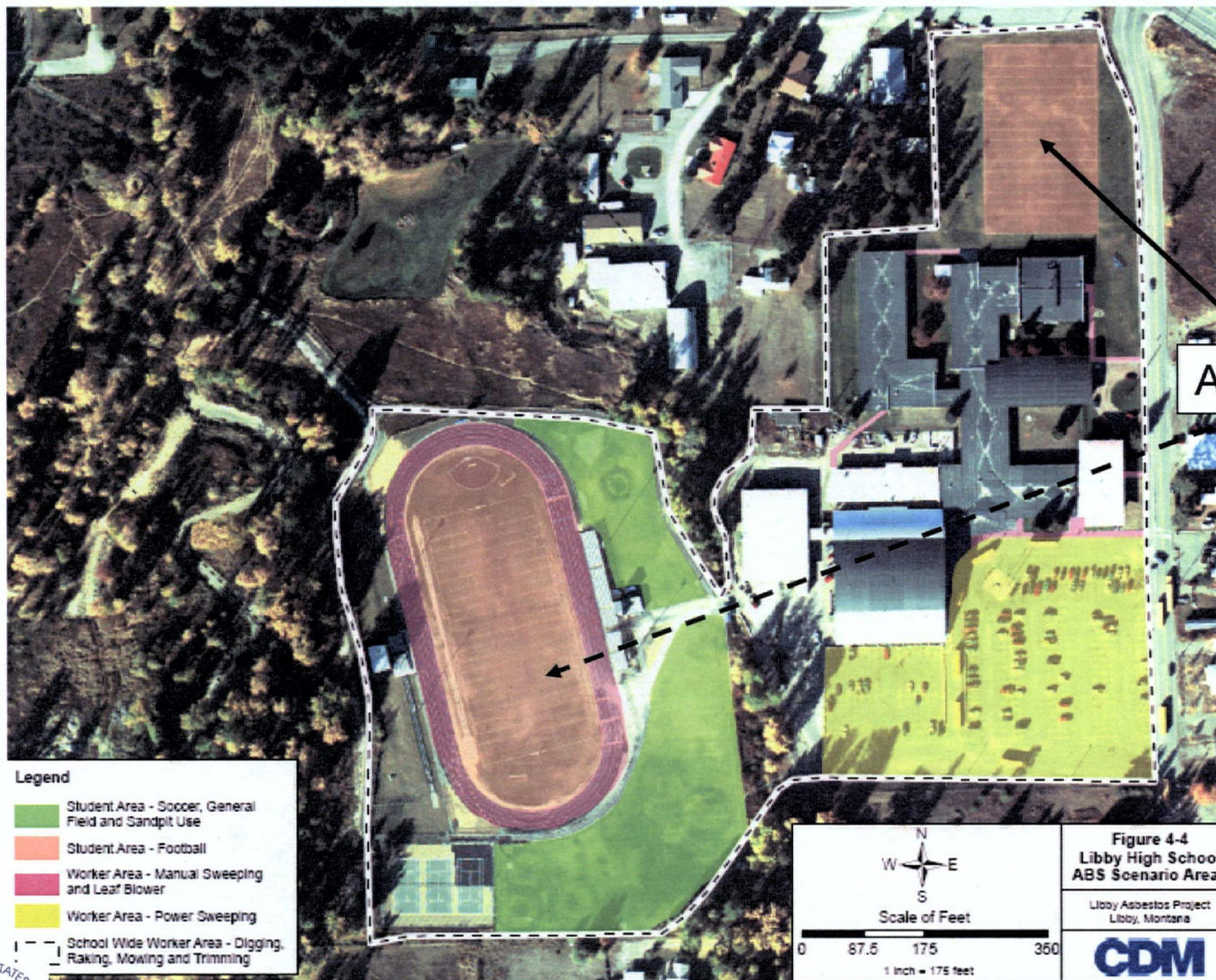
Figure 4-3
Libby Middle School
ABS Scenario Areas

Libby Asbestos Project
Libby, Montana

CDM



Libby High School



Libby Administration Building



No outdoor
detections

Legend

- Student Area - Swinging, General Playground Use
- Worker Area - Manual Sweeping
- Worker Area - Power Sweeping
- School Wide Worker Area - Digging, Raking, Mowing and Trimming



Scale of Feet

0 50 100 200
1 inch = 100 feet

Figure 4-5
Libby Administration
Building
ABS Scenario Areas

Libby Asbestos Project
Libby, Montana

CDM



Summary of ABS Sampling

- Kootenai Valley Head Start; Grounds keeper, Mowing/Edging scenario, 0.0022 LA s/cc (detection limit 0.0022 LA s/cc)
- Libby Elementary School; Student, Swinging scenario, 0.0389 LA s/cc (detection limit 0.0389 LA s/cc)
- Libby Middle School; Student, Soccer/Swing scenario. 0.0107 (detection limit 0.0107 LA s/cc)
- Libby Middle School; Grounds keeper, Digging/raking/sweeping Scenario, 0.0028 LA s/cc (detection limit 0.0028 LA s/cc)*
- Libby High School; Student, Football scenario, 0.0025 LA s/cc (detection limit 0.0025 LA s/cc)

* No PCME fibers present



Soil Samples

- Total of 41 composite samples taken at 5 schools (correspond to ABS sampling areas)
- Scored for visible vermiculite and PLM-VE
 - 6 samples had visible scores
 - All 5 schools had PLM-VE detections



PLM-VE Classification

- Bin A: No LA detected
Referred to as non-detect.
- Bin B1: $>$ Non-detect, but $<0.2\%$
Referred to as trace.
- Bin B2: $>0.2\%$, but $<1\%$
Referred to as $<1\%$.
- Bin C: $\geq 1\%$
Referred to as 1%, 2%, etc.



Soil Sample Summary

- Kootenai Valley Head Start
 - 1 visible detection
 - 7 PLM-VE analyses: 6 trace; 1 non-detect
- Libby Elementary School
 - 2 visible detections
 - 9 PLM-VE analyses: 5 trace; 4 non-detect
- Libby Middle School
 - No visible detections
 - 9 PLM-VE analyses: 6 trace; 3 non-detect



Soil Sample Summary (cont'd)

- Libby High School
 - 2 visible detections
 - 9 PLM-VE analyses: 9 trace; 0 non-detect
- Libby Administration Building
 - 1 visible detection
 - 7 PLM-VE analyses: 5 trace; 2 non-detect



Analytical Soil Results- Yesterday and Today

Comparison of highest detectable levels of LA show a reduction from % level detections in 2001 to trace detections in 2009.

School	2001 Levels	2009 Levels
Kootenai Valley Head Start	5% by PLM	trace by PLM
Libby Elementary School	<1% by PLM	trace by PLM
Libby Middle School	15% by PLM	trace by PLM
Libby High School	8% by PLM	trace by PLM
Libby Admin. Building	All non-detect	trace by PLM



Ambient Air Results- Yesterday and Today

Date of Sampling	Location	Ambient Air Concentration
Pre-1990	City Center	0.59 s/cc
2002	Lincoln County Courthouse Annex	0.00010 to 0.00086 s/cc
2008	Average of 6 community-wide ambient air monitors	0.0000056 s/cc



What does this mean for parents?

- Is it okay to send my child to school? **Yes**
- Levels that were detected are within acceptable exposure levels as used at other Superfund sites
- We think these small indoor detections are due to “track-in” rather than LA source materials in schools



What does this mean for parents?

- Outdoor levels of LA have been significantly reduced
- Air quality has been significantly improved
- LA will remain at low levels in the Libby valley
- We can expect sporadic detections of fibers indoors and outdoors



Actions Items

- Work with the school board to address and schedule future actions
- Continue to keep the community involved and informed
- EPA will conduct cleanups consistent with current criteria
- EPA will continue to monitor schools, analyze the data and make informed decisions

